CLAIMS

I claim:

[c001] 1. An orthopedic device for transfer of pressure from a sensitive area of a body to an adjacent load-bearing area of the body, the orthopedic device comprising:

(a) a pod that interfaces to a load-bearing contact surface;

(b) a support means having a length, an upper end and a lower end, said pod being pivotably attached to said support means at said lower end; and

(c) an attachment means for attachment of the orthopedic device to the load-bearing area of the body and connected to said support means at said upper end.

[c002] 2. The orthopedic device of claim 1 wherein said support means has a means of adjustment of said length.

[c003] 3. The orthopedic device of claim 2 wherein said support means comprises a pair of support arms, each support arm of said pair of support arms in turn comprising:

(a) a rigid shorter support arm member;

(b) a shorter adjustment panel comprising either of a hook or loop portion of a hook and loop fastener, said shorter adjustment panel being adhered to said rigid shorter support arm member;

(c) a rigid longer support arm member providing at one end a means of pivotable attachment to said pod;

(d) a longer adjustment panel comprising the portion of a hook and loop fastener that is complementary to that of said shorter adjustment panel, said longer adjustment panel being adhered to said rigid longer support arm member; and

(e) said rigid shorter support arm member being coupled to said rigid longer support arm member by releasably engaging said shorter adjustment panel with said longer adjustment panel with a longitudinal offset appropriate to adjust said length of said support means.

[c004] 4. The orthopedic device of claim 2 wherein said means of adjustment of said length is by disconnecting a hook and loop fastener and reconnecting said hook and loop fastener with a longitudinal offset between the hook portion and the loop portion of said hook and loop fastener.

[c005] 5. The orthopedic device of claim 2 wherein said support means comprises a pair of support arms, each support arm of said pair of support arms in turn comprising:

(a) a rigid shorter support arm member being an attachment plate having a first set of longitudinally spaced holes;

(b) a rigid longer support arm member being an attachment plate having a second set of longitudinally spaced holes nearer one end and a means of pivotable attachment to said pod at the other end; and

(c) at least one threaded fastener having a head that is beveled or otherwise capable of being recessed when threadably engaged;

wherein

one of said first or second set of longitudinally spaced holes is a set of through-holes being beveled or otherwise shaped so as to receive the at least one threaded fastener;

the other of said first or second set of longitudinally spaced holes is a set of threaded holes so as to engage the threaded portion of the at least one threaded fastener;

the spacing of the holes in said set of through-holes being either the same as, or a small integral multiple of, the spacing of the holes in said set of threaded holes;

said length of said support means being established by coupling of said rigid shorter support arm member to said rigid longer support arm member by placing the faces of said rigid shorter support arm member and said rigid longer support arm member in contact with one another with a longitudinal offset appropriate to adjust said length of said support means, realigning as appropriate so that at least one of said set of threaded holes aligns with a near hole from said set of through holes, the at least one threaded fastener then being inserted into the near hole from said set of through holes and threadably engaged with the corresponding threaded hole.

[c006] 6. The orthopedic device of claim 2 wherein said support means comprises a pair of support arms, each support arm of said pair of support arms in turn comprising:

(a) a rigid shorter support arm member being an attachment plate having a first set of longitudinally spaced horizontal ridges with a cross section being that of downward-facing saw teeth; and

(b) a rigid longer support arm member being an attachment plate having a second set of longitudinally spaced horizontal ridges with a cross section being that of upward-facing saw teeth nearer said upper end and a means of pivotable attachment to said pod at said lower end;

wherein

the downward-facing saw teeth of said rigid shorter support arm member are engaged with the upward-facing saw teeth of said rigid longer support arm so as to adjust said length of said support means, the support arm members being thus coupled are inserted into a sleeve of said attachment means, said sleeve providing sufficient force orthogonal to the ridged faces of the coupled support arm members to prevent them from disengaging one from the other.

[c007] 7. The orthopedic device of claim 1 wherein said attachment means provides a quick-release means.

[c008] 8. The orthopedic device of claim 7 wherein said quick-release means is constructed using a fastener of the hook and loop type.

[c009] 9. The orthopedic device of claim 1 wherein said sensitive area is a human knee and said load-bearing area is the adjoining thigh.

[c010] 10. The orthopedic device of claim 1 wherein said sensitive area is a human elbow and said load-bearing area is the adjoining upper arm.

[c011] 11. The orthopedic device of claim 1 wherein said sensitive area is a human pelvic and gluteal region and said load-bearing area is the torso.

[c012] 12 A method that allows a person to kneel as if on a knee without contact of said knee to a kneeling surface, the method comprising:

(a) attaching a support structure to the thigh above said knee; and

(b) moving the person into a kneeling position such that contact with said kneeling surface is made by a pod pivotably attached to the distal end of said support structure so as to provide a protective space between said pod and said knee, thereby transferring the load presented by the kneeling person from said kneeling surface directly to the thigh, by means of said pod and said support structure associated with said pod, completely bypassing said knee.

[c013] 13 The method of claim 12 wherein the protective space is between about ½ and 1-inch.

[c014] 14 A method of transferring a load from a pressure-sensitive area of a body to a load-bearing area of the body, wherein said load is generated as if said pressure-sensitive area of the body were to rest upon a support surface, said transfer of the load being accomplished without contact between said pressure-sensitive area of the body and said support surface, the method comprising:

(a) attaching a support structure to said load-bearing area of the body; and

(b) moving the body into a position as if said pressure-sensitive area of the body were to rest upon said support surface such that contact with said support surface is made by a pod pivotably attached to the distal end of said support structure so as to provide a protective space between said pod and said pressure-sensitive area of the body, thereby transferring the load presented by the body upon said support surface from said support surface directly to said load-bearing area of the body, by means of said pod and said support structure associated with said pod, completely bypassing said pressure-sensitive area of the body.

[c015] 15. The method of claim 14 wherein

(a) said pressure-sensitive area of the body is a knee;

(b) said load-bearing area of the body is the thigh adjoining said knee; and

(c) said position is kneeling as if on said knee.

[c016] 16 The method of claim 15 wherein the protective space is between about ½ and 1-inch.

[c017] 17. The method of claim 14 wherein

(a) said pressure-sensitive area of the body is an elbow;

(b) said load-bearing area of the body is the upper arm adjoining said elbow; and

(c) said position is leaning as if on said elbow.

[c018] 18. The method of claim 17 wherein the protective space is between about ½ and 1-inch.

[c019] 19. The method of claim 14 wherein

(a) said pressure-sensitive area of the body is buttocks;

(b) said load-bearing area of the body is the torso associated with said buttocks; and

(c) said position is sitting as if on said buttocks.

[c020] 20. The method of claim 19 wherein the protective space is between about 1½ and 3-inches.